

**AMENDMENTS TO THE DRAWINGS:**

As requested by the Examiner, a replacement drawing sheet for Figure 1 has been submitted herewith, including the designation --Prior Art--.

Attachment: Replacement Sheet, Figure 1 (also includes Figure 2)

### **REMARKS**

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of September 7, 2006.

Re-examination and reconsideration of the Application are respectfully requested.

#### **Amendments to the Drawings**

As requested by the Examiner, a replacement drawing sheet for Figure 1 has been submitted herewith, including the designation --Prior Art--.

#### **The Specification**

Amendments to the specification have been made to correct several typographical errors.

#### **The Office Action**

Claims 1-26 were presented for examination.

Figure 1 was objected to for not including the designation --Prior Art--.

Claims 1, 2, 4, 9, 15, 17 and 21 stand rejected as being anticipated by U.S. Patent Muurinen (6,504,492).

Claims 3, 5-8, 10-14 and 22-26 are rejected as being obvious in view of Muurinen ('492).

Claims 16 and 20 are noted to contain allowable subject matter.

#### **Independent Claim 1 And Its Dependent Claims Are Distinguished From The Cited Art**

By way of brief review, the present application is directed to an actuation system, such as those which may be used with smart matter that can be employed to move sheets of paper (for example, in a printing machine), maneuver an aircraft by performing tiny adjustments to wing surfaces, or to otherwise produce some physical output in response to an input signal. In the first example, actuators in the form of air jets apply forces to a sheet of paper to direct the motion of the sheet through a printing machine.

On the other hand, the cited Muurinen '492 patent is directed to a keypad arrangement used for providing electrical information to an electronic device. More particularly, the cited patent provides a keypad structure that allows for the location and number of keys to be varied without essential modifications to the inner structure of the

keypad. The keypad is built on top of certain essentially continuous conducting means to provide a very large number of unambiguously identifiable current paths as a response to depressions at various locations on the keypad. Thus, the electrical characteristics of the created electrical connection acts to uniquely identify the location of the depressed key in relation to the essentially continuous conducting means. By such an arrangement, a key can be put anywhere on the pad, and it can be correlated to the designation of the key based on the electrical output.

Applicants respectfully submit the above two concepts are entirely different from each other, and as such, the structure as recited in claim 1 is not taught or fairly suggested by the Muurinen '492 patent or the other cited art.

Initially, Applicants respectfully submit the interpretations of what is set forth in patent '492 do not reasonably comport with the intended meaning in that patent. More specifically, in the rejection of claim 1, it appears the Examiner's interpretation of the limitations corresponding to claim 1 in the Office Action are as follows:

- a control signal of claim 1 is key 907 of Figure 9 of '492;
- the plurality of rows of actuators of claim 1 is first resistive plane 901 of Figure 9 of '492;
- the first electrode of claim 1 is left electrode 905 and the first voltage is Vcc of Figure 9 of '492; and
- the second electrode of claim 1 is right electrode 906, and the second voltage is Vout of Figure 9 of '492.

Nowhere in the rejection is there an identification of "a resistive strip connected to the plurality of rows of actuators", as found in claim 1.

While the patent does use the term "resistive strip", these elements are designated as elements 301 and 302, such as in Figures 3a, 4a, 5a, etc. The use for these resistive strips are shown, for example, in Figure 3a and discussed in column 4, beginning on line 55. It is noted that at point 303 there is a conductive connection between resistive strips 301 and 302, caused, for example, by a conductive dome being pressed simultaneously against the surfaces of both resistive strips. Knowing certain distances, a position for that particular key can be determined.

Therefore, under the analogy of the Office Action, it would appear that resistive strips (e.g., 301 and 302) would need to be argued as being the row of actuators of claim 1, meaning there is no teaching of the resistive strip as recited in claim 1, and certainly no teaching of a resistive strip connected to the plurality of actuators.

To attempt to argue that a resistive strip discussed in the '492 patent are the same as in claim 1, means there would then be no showing of the plurality of rows of actuators. In other words, if the "first resistive plane 901 of Figure 9" is argued (as in the Office Action) to be analogous to the "plurality of rows of actuators of claim 1", then there is no teaching or suggestion as to the "resistive strip connected to the plurality of rows of actuators", of claim 1. On the other hand, if it is argued that the resistive plane 901 (and its similarly functioning elements such as resistive strips 301, 302, etc.) are argued to be the resistive strips of the claim 1 of the present application, then there is no teaching as to the plurality of rows of actuators. Specifically, the Examiner would have to use the same elements of '492 for two separate and distinct elements in claim 1. This problem arises due to the fact that the patent '492 and the concepts of the present claim 1 are completely distinct. It appears the only similarity is that certain similar words are used within the two documents. However, the use of those words and their meanings are entirely different.

Still further, although it is argued in the Office Action that the "plurality of rows of actuators" of claim 1 is taught by the "first resistive plane 901 of Figure 9", this is not confirmed by a review of the '492 patent. In reviewing Figure 9, 901 does not show any "plurality of rows of actuators." It is noted in column 8, beginning on line 43, that the resistive planes "may be continuous or consist of e.g. a resistive mesh on the surface of a dielectric plate." There is no discussion regarding a plurality of rows, much less a plurality of rows of actuators.

For at least these reasons, the concepts of claim 1 are not taught or fairly considered.

Possibly even more importantly, Applicants traverse the Examiner's interpretation of actuator response. In the cited '492 patent, depression of the key causes an output signal which can be correlated to the location of the key. Thus, this provides flexibility in the design of the face of a keypad.

Applicants respectfully submit the cited '492 patent is not directed to a system which produces an actuator response, but rather is a system where an actuator (e.g., 908) generates positional information. Therefore, the '492 patent does not produce an actuator response as recited in claim 1. The only operation disclosed in the '492 patent as to an actuator is with regard to actuator 908.

As claims 2-8 further define independent claim 1, it is submitted these claims are also distinguished.

**Independent Claim 9 And Its Dependent Claims Are Distinguished From The Cited Art**

In the Office Action, the Examiner indicated claim 16 contained allowable subject matter. Applicants have amended the essential limitations of claim 16 into independent claim 9, and therefore it is considered this claim is now distinguished.

As remaining dependent claims 10-15 further define the now-distinguished claim 9, it is submitted these claims are also distinguished.

**Independent Claim 17 And Its Dependent Claims Are Distinguished From The Cited Art**

In the Office Action the Examiner indicated claim 20 contained allowable subject matter. Applicants have amended claim 17 to incorporate the essential limitations of now-canceled claim 20. For this reason, it is submitted claim 17 is distinguished from the cited art.

As dependent claims 18 and 19 further define now-distinguished claim 17, it is submitted these claims are also distinguished.

**Independent Claim 21 And Its Dependent Claims Are Distinguished From The Cited Art**

Applicant respectfully submits the arguments related to independent claim 1 are appropriate to distinguishing the concepts of claim 21 from the cited art. However, to further distinguish this claim, Applicants have amended the language in claim 21 to specifically recite that the control signal is an electrical control signal, and the actuator response is a non-electrical actuator response. It is submitted this change clearly distinguishes claim 21 from the concepts the Examiner is attempting to apply to the cited claims. For these reasons, it is submitted claim 21 is distinguished from the cited art.

As dependent claims 22-26 depend from and further define independent claim 21, it is submitted these claims are also distinguished.

**New Claims 27 And 28**

New claims 27 and 28 have been added to depend from independent claim 1. It is submitted these claims further define independent claim 1 and are distinguished from the cited art.

**CONCLUSION**

For the reasons detailed above, it is submitted all claims remaining in the application (Claims 1-15, 17-19, 21-28) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

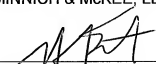
In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Mark Svat, at Telephone Number (216) 861-5582.

Respectfully submitted,

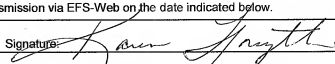
FAY, SHARPE, FAGAN,  
MINNICH & McKEE, LLP

November 8, 2006

Date

  
Mark S. Svat  
Reg. No. 34,261  
1100 Superior Avenue, 7<sup>th</sup> Floor  
Cleveland, Ohio 44114-2579  
(216) 861-5582

Attachment: Replacement Sheet, Figure 1 (also includes Figure 2)

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